We Claim:

1. A method for separating particles comprising the steps of:

flowing the particles within a first constrained path, the first constrained path having an input and an output, and a sorting region, the sorting region coupling to a second constrained path, the second constrained path including an output,

illuminating the sorting region with a moving optical gradient,

characterized in that certain of the particles flow in a laminar manner between the first inlet and the output of the first constrained path, and

selected particles are diverted from the first constrained path to the second constrained path under the force of the moving optical gradient.

2. The method of claim 1 wherein the constrained path is a channel.

3. The method of claim 1 wherein the constrained path is a plane.

4. The method of claim 1 wherein the sorting region comprises a T intersection.

5. The method of claim 1 wherein the sorting region comprises a H intersection.

6. The method of claim 1 wherein the sorting region comprises a X intersection.

7. The method of claim 1 wherein the sorting region comprises a Y intersection.

8. The method of claim 2 wherein the channel is a microchannel.

9. The method of claim 8 wherein the microchannel is formed in a substrate.

10. The method of claim 8 wherein the microchannel is formed on a substrate.

11. A device for optically sorting particles comprising:

an inlet for receiving a fluidic media including the particles,

a first fluidic path in communication with the inlet, the path including a first sorting region, the first sorting region including at least two outlets,

an illumination system for providing an optical moving gradient at the first sorting region,

a second fluidic path connected to at least one of the outlets from the first sorting region,

a second sorting region coupled to the second fluidic path, the region having at least two outlets, and

a second optical moving gradient for illuminating the second sorting region, to sort particles between the at least two outlets of the second sorting region.

12. The device of claim 11 wherein a feedback loop is provided.

13. The device of claim 11 wherein the first junction comprises a T junction.

14. The device of claim 11 wherein the first junction comprises a H junction.

15. The device of claim 11 wherein the first junction comprises a X junction.

16. The device of claim 11 wherein the first junction comprises a Y junction.

17. The device of claim 11 wherein the second output of the first sorting region is connected to a third sorting region.

18. The device of claim 17 wherein the third sorting region is illuminated by an optical moving gradient.

19. The device of claim 11 wherein the second optical moving gradient is formed by the same illumination system which generates the first optical moving gradient.

20. The device of claim 11 wherein the second optical moving gradient is formed by a different illumination system than the one which generates the first optical moving gradient.

21. The device of claim 11 further including a pumping system.

22. The device of claim 11 further including a plurality of reservoirs to hold sorted particles.

23. The device of claim 11 further including a sensor disposed to detect the movement of particles.

24. The device of claim 11 wherein the illumination system includes a laser.